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None

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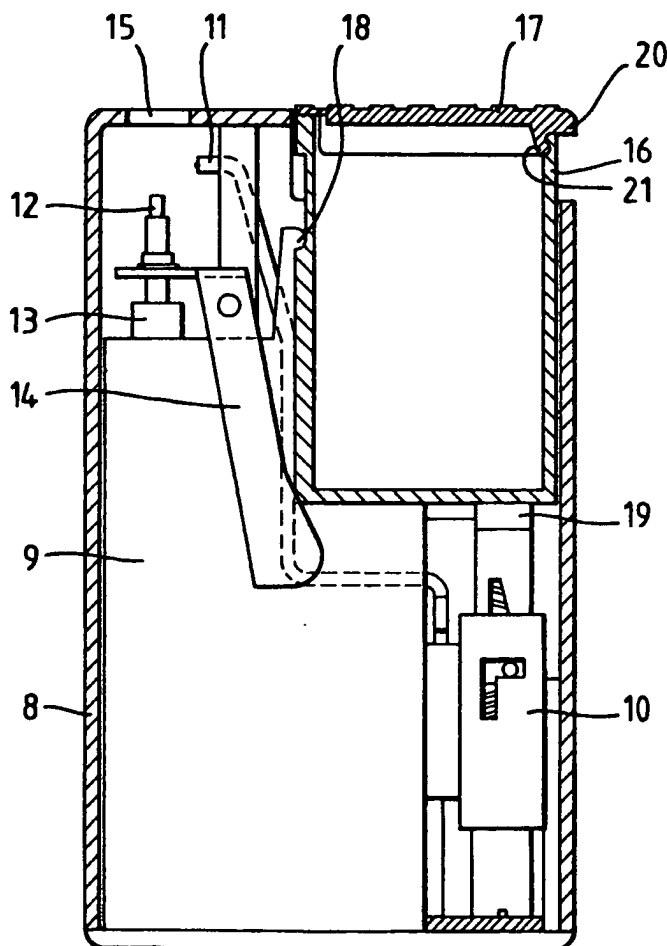
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Selected US specifications from IPC sub-class F23Q

(54) Flame lighter

(57) A gas burning flame lighter has an actuating member (17) forming the hinged lid of a box insert (16), which provides a secret compartment. A burner valve (13) is opened and a piezoelectric ignition unit (10) is operated by depressing the actuating member (17) and insert (16). The insert (16) may be removed from the lighter casing (8), by pulling upwards.

Fig.7.



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Fig. 2.

Fig. 1.

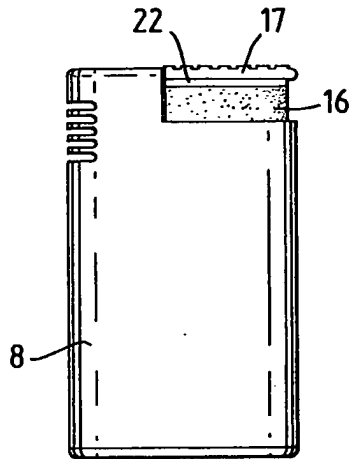
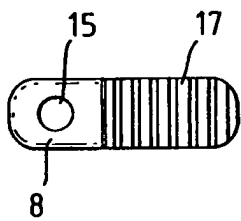


Fig. 3.

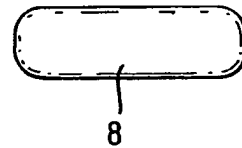


Fig. 4.

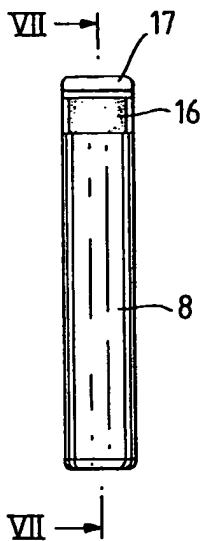


Fig. 5.

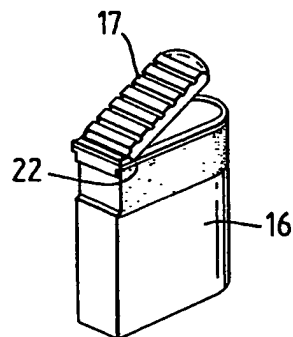


Fig. 6.

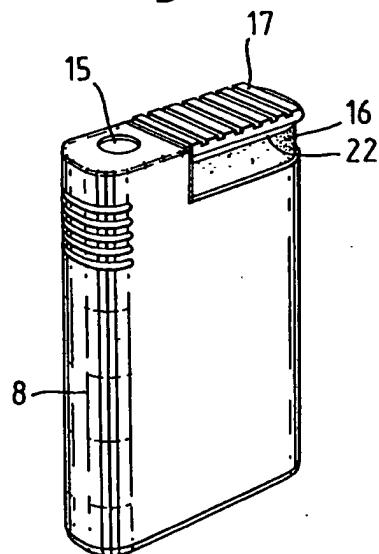
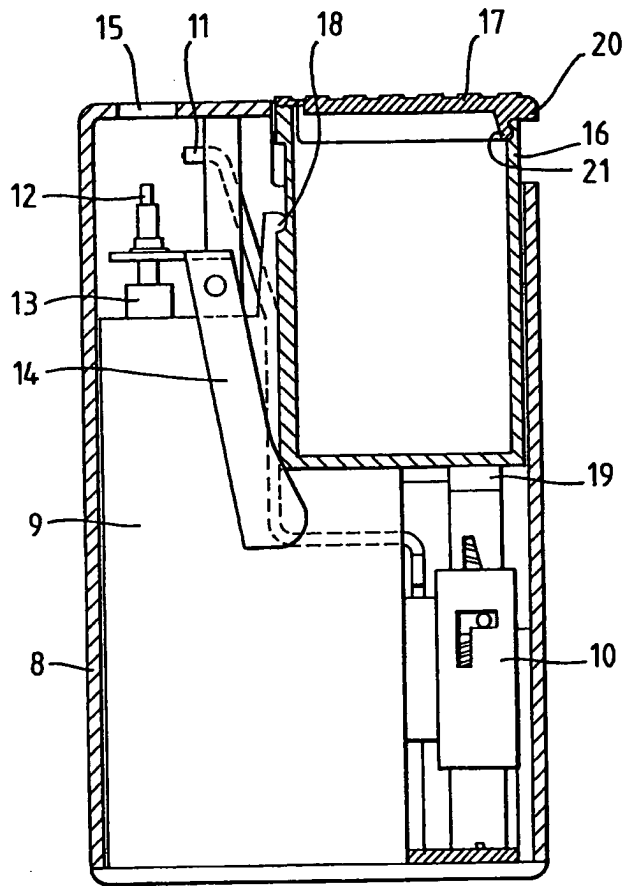


Fig. 7.



## SPECIFICATION

## Flame lighter

- 5 The invention relates to a gas-burning flame lighter, for use by smokers or others, in which a casing accommodates a reservoir for liquefied gaseous fuel, a burner nozzle connected to the reservoir via a burner valve, an
- 10 electrical spark ignition mechanism, such as a piezoelectric ignition mechanism, and, alongside the burner nozzle, an actuating member, which is depressible to perform at least one, and preferably both, of the functions of opening
- 15 the burner valve and operating the ignition mechanism. Such a lighter is hereafter referred to as of the kind described.

In lighters of this kind there is frequently wasted space within the casing beneath the actuating member and the inventor has now appreciated that this space can be used to accommodate a secret compartment.

In accordance with the present invention, the casing of a lighter of the kind described accommodates, beneath the actuating member, a box-like storage compartment which is accessible upon displacement of the actuating member.

Such a compartment forms a hidden chamber which can be used to store materials such as pills, jewels, or a small charge of pipe tobacco.

The actuating member could be arranged to be displaced to provide access to the compartment by being swung upwards, or slid laterally from above the compartment. Preferably, however, the compartment is provided by a box insert which is slidably removable out of, for example, the top of, the casing and in this case the actuating member is most conveniently a hinged or sliding lid of the box insert. The box insert may then, for example, be removed by being gripped and pulled out, thus overriding a spring clip which may be

45 used for retaining the box insert in the casing. If the actuating member is then a hinged lid of the box insert, an additional spring clip may be provided between the lid and the box insert to prevent the lid from swinging open during the withdrawal of the box insert from the casing, particularly when the box insert is withdrawn upwards.

When a box insert is slidable in the casing, it is conveniently used to transmit the operative movement of the actuating member to one or both of the ignition mechanism and burner valve.

An example of a lighter constructed in accordance with the present invention is illustrated in the accompanying drawings, in which:-

*Figure 1* is a plan;

*Figure 2* is a front elevation;

*Figure 3* is an underneath plan;

65 *Figure 4* is a side elevation;

*Figure 5* is a perspective view of a box insert;

*Figure 6* is a perspective view of the lighter; and,

70 *Figure 7* is a section taken on the line VII-VII in Fig. 4.

The lighter has a casing 8 containing a fuel tank 9, a conventional piezoelectric ignition unit 10 connected to a discharge electrode

75 11, which is situated adjacent to a burner nozzle 12. The nozzle is mounted on the tank 9 via a conventional burner valve 13, which is opened by a pivoted lever 14, to vent fuel and, after ignition, provide a flame through a flame aperture 15 in the casing.

A box insert 16 is slidable in the casing and has a flip-top lid 17 which is connected to the rest of the insert by a film hinge along one edge. The box insert 16 is retained within the

85 casing 8 by means of a resilient lug 18 formed integrally with the tank 9. As can be seen from Fig. 7, the box insert 16 rests on the top of the actuating plunger 19 of the ignition unit 10 and also bears against the

90 lower end of the lever 14. This lid 17 forms the actuator member proper for the lighter and depression of this part is transmitted by downward sliding of the box insert 16 to depress the actuating plunger 19 of the ignition

95 unit 10 and to swing the lever 14 in a clockwise direction to open the burner valve 13, and hence cause the ignition of a flame at the burner 12 by discharge of a spark from the electrode 11 to the casing 8. The flame is extinguished by releasing the lid, which, together with the insert, is then raised to the rest position by the return springs for the plunger 19 and the burner valve, the burner valve closing to shut off the gas flow.

The box insert 16 may be removed from the casing 8 by gripping the top of the insert and withdrawing the insert, thus overriding the resilience of the lug 18. Upward pressure to withdraw the box insert is applied to the body

110 of the insert, rather than to the lid 17, because the body is provided along each longer side with a rib 22 projecting out beneath the overlying side of the lid. When the top of the box insert is gripped between finger and thumb and pulled upwards, the lid is thus applied to the ribs.

The lid 17 of the box may be opened before or after withdrawal of the box insert, by inserting a finger beneath a projecting lip 20

120 of the lid and swinging it upwards about a film hinge at its opposite edge. This movement of the lid relatively to the rest of the box insert is inhibited during withdrawal of the box insert by virtue of a resilient lug 21 which engages a complementary notch in the inner wall of the box insert 16. Fig. 5 shows the box insert 16 withdrawn and the lid 17 open.

## CLAIMS

130 1. A gas-burning flame lighter, in which a

- casing accommodates a reservoir for liquefied gaseous fuel, a burner nozzle connected to the reservoir via a burner valve, an electrical spark ignition mechanism and, alongside the burner nozzle, an actuating member, which is depressible to perform at least one of the functions of opening the burner valve and operating the ignition mechanism; characterised in that the casing accommodates, beneath the actuating member, a box-like storage compartment which is accessible upon displacement of the actuating member.
2. A lighter according to claim 1, in which the compartment is provided by a box insert which is slidably removable out of the casing.
3. A lighter according to claim 2, in which the actuating member is a lid of the box insert.
4. A lighter according to claim 3, in which the lid is a hinged lid of the box insert.
5. A lighter according to any one of claims 2 to 4, in which the slidable movement of the box insert in the casing is arranged to transmit the operative movement of the actuating member to at least one of the burner valve and ignition mechanism.
6. A flame lighter, substantially as described with reference to the accompanying drawings.